

Claims

1. A network system, in which data is transmitted in form of transmission frames, comprising
 5 a network control unit (4) for controlling communication in a network (1); and

a terminal (2) for receiving and transmitting data from/to said network control unit (4) at a transmission data rate; wherein

said network control unit (4) is adapted to receive a request for
 10 changing a user data rate from a first user data rate to a second user data rate,
 said network control unit (4) adds/deletes fill data (FD) to/from a transmission frame corresponding to the request for changing said user data rate for transmitting data to said terminal (2) at said second user data rate with a change in amount of fill data (FD); and

15 said terminal (2) is adapted to detect the change in the amount of fill data (FD) and to change the user data rate for transmitting data to said network control unit (4) according to the detected change.

2. The network system according to claim 1, wherein said terminal (2)
 20 adds/deletes fill data corresponding to the request for changing said user data rate in transmission frames for data transmitted from said terminal (2) to said network control unit (4) for transmitting data to said network control unit (4) at said second user data rate.

25 3. The network system according to claim 2, wherein the transmission data rate remains unchanged upon the change of the user data rate.

4. The network system according to claim 1, wherein said terminal (2)
 discards said fill data (FD) when receiving said transmission frames.

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5. The network system according to claim 1, wherein said network control unit (4) indicates presence of fill data (FD) in a predetermined part of said transmission frame.

35 6. The network system according to claim 4, wherein said network control unit (4) indicates an amount of fill data (FD) in a predetermined part of said transmission frame.

7. The network system according to claim 1, wherein said network control unit (4) indicates absence of fill data (FD) in a predetermined part of said transmission frame.

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8. The network system according to claim 2, wherein said terminal (2) is adapted to detect said second user data rate from a fill data absence/presence indication and from a fill data amount indication in said transmission frame.

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9. The network system according to claim 1, wherein said network control unit (4) comprises a network interworking means (41, 42) which is adapted to provide an interface between said network (1) and a second network (5).

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10. The network system according to claim 9, wherein said network interworking means (41, 42) is adapted to receive said request for changing the user data rate from said second network (5).

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11. The network system according to claim 9, wherein said network interworking means (41, 42) initiates said request for changing the user data rate.

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~~12.~~ A network control method, in which data is transmitted in a form of transmission frames between a network control unit (4) for controlling communication in a network (1) and a terminal (2) for receiving and transmitting data from/to said network control unit (4) at a transmission data rate, comprising the steps of:

receiving a request for changing a user data rate from a first user data rate to a second user data rate,

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adding/deleting an amount of fill data (FD) to/from a transmission frame corresponding to the request for changing the user data rate for transmitting data from said network control unit (4) to said terminal (2);

detecting by said terminal (2) a change in the amount of fill data (FD) in said data frame and

changing the user data rate used by said terminal (2) for transmitting data to said network control unit (4) according to the detected change.

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13. The method according to claim 12, further comprising the step of

adding/deleting fill data corresponding to the request for changing said user data rate in transmission frames for data transmitted from said terminal (2) to said network control unit (4) for transmitting data to said network control unit (4) at said second data rate.

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14. The method according to claim 13, wherein the transmission data rate remains unchanged upon changing the user data rate.

15. The method according to claim 12, further comprising the step of discarding said fill data (FD) in said terminal (2) when receiving said transmission frames.

16. The method according to claim 12, further comprising the step of indicating presence of fill data (FD) in a predetermined part of said transmission frame.

17. The method according to claim 16, further comprising the step of indicating an amount of fill data (FD) in a predetermined part of said transmission frame.

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18. The method according to claim 12, further comprising the step of indicating absence of fill data (FD) in a predetermined part of said transmission frame in case of a upwards change of said user data rate.

19. The method according to claim 17, wherein said step of detecting is performed by detecting a fill data absence/presence indication and from a fill data amount indication in said transmission frame.

20. The method according to claim 1, wherein said request for a data rate change is issued by a second network (5).

21. The method according to claim 1, wherein said request for changing the user data rate is initiated by said network interworking means (41, 42).

22. A terminal for a network system comprising at least one network control unit and at least one terminal,

in which system data is transmitted in transmission frames which may include fill data, the terminal comprising:

means for receiving transmission frames from the at least one network control unit (4);

5 means for transmitting transmission frames to said network control unit (4);

means for detecting a change in an amount of fill data (FD) in received transmission frames; and

10 means for changing a user data rate for the transmission of data to said network control unit (4) according to the detected change.

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